

Claims

1. A system of asynchronous communication between clients and web servers, whereby the client requests data from the web server, and the data is not immediately available; said request to data is represented by an Asynchronous Hyperlink Object (AHO) and the web server acknowledges the request to the client and fulfills the request at a later time when said data is available.
2. A system as defined in claim 1 whereby normal, or synchronous, hyperlinks are converted to AHOs and AHOs are converted to normal hyperlinks.
3. A system as in claim 1, comprising in addition of a software or hardware component in the client and/or a separate system, said component is herein defined as *Client AHO Agent* (CAHOA), and it's function is to interact with the AHO on behalf of the client.
4. A system as in claim 3, wherein the CAHOA is pre-built or pre-installed in the client and/or other system or created/deployed in the moment an AHO is created or deployed on behalf of the client.
5. A system as in claim 1, comprising in addition of a software or hardware component in the Server system, said component is herein defined as a *Server AHO Agent* (SAHOA), and it's function is to interact with the AHO on the server side.
6. A system as in claim 5, wherein the SAHOA is pre-built or pre-installed in the server system or created/deployed in the moment the AHO is created.

7. A system as in claim 1 in which the AHOs in progress are represented in the client system in a graphical user interface, wherein said graphical user interface is standalone or part of an existing graphical user interface.
8. A system as in claim 7, in which an icon indicates when a change occurs in the status of any one of the AHOs.
9. A system as in claim 7 wherein each AHO is further represented by an individual icon, herein defined as *AHO Icon*.
10. A system as in claim 9, in which the AHO Icon can change in form or color and said change represents or indicates that a change has occurred in the AHO's process.
11. A system as in claim 7, in which the graphical user interface consists of a list and said list lists every AHO in progress.
12. A system as in claim 7, in which every AHO whose process ends successfully goes to the history list.
13. A system as in claim 7, in which an AHO that is terminated by the client or server prior to its completion becomes an *Orphan AHO* and goes to the orphan list.
14. A system as defined in claim 1, whereby the client request cannot be exactly fulfilled by the web server and instead, the fulfillment consist of at least one alternative.
15. A system as defined in claim 14, whereby the nature of the alternative is governed by "affinity rules" or a system that determines or selects items that are close or related to the original request

16. A system as defined in claim 14, whereby the alternative consists of at least one new AHO request.
17. A system as in claim 1, whereby the web server cannot fulfill the client's request exactly because of an error in the request, said web server corrects said client's request.
18. A system as in claim 17, whereby the fulfillment consists of modifying the client request and automatically fulfilling said modified request.
19. A system as defined in claim 17, whereby the modified request is presented to the client before proceeding to fulfill the request.
20. A system as in claim 17, whereby the client request cannot be exactly fulfilled by the server and instead, the web server notifies the client and requests that the client modify the request.
21. A system as in claim 1, whereby the client request results in a specific type of AHO, wherein the server is able to predict the completion time and the client is notified of this time, and said type of AHO is herein defined as a *Predictable AHO*.
22. A system as in claim 1, whereby the client request results in a specific type of AHO, wherein the server does not or is not capable of predicting the completion time for the request and the client is notified of the undetermined completion time, and said type of AHO is herein defined as an *Unpredictable AHO*.
23. A system as in claim 1, whereby the client request results in a specific type of AHO, wherein the server schedules the completion time for the request and the

client is notified of said scheduled completion time, and said type of AHO is herein defined as *Time-based AHO*.

24. A system as in claim 23, in which said specific date and time is a periodic event.
25. A system as defined in claim 23, whereby the resulting AHO fulfills the request in a periodic manner until a final event is reached.
26. A system as in claim 1, whereby the client request results in a specific type of AHO, wherein the web server informs the client that the web server will fulfill the request once the web server receives a predetermined number of similar requests, and said type of AHO is herein defined as *Count-based AHO*.
27. A system as in claim 1, whereby the client request results in a specific type of AHO, wherein the web server informs the client that the web server will fulfill the request once a predetermined condition is met, and said type of AHO is herein defined as *Condition-based AHO*.
28. A system as in claim 1, whereby the client request results in an AHO and the fulfillment of the AHO is based on a server-side priority system or rating.
29. A system as in claim 1, further comprising of at least one standby server, which is functional whenever the web server is unavailable for any reason, said standby server acknowledges the receipt of requests from all clients, and generates AHO agents in response to the requests, so that no client request is ignored.
30. A system as in claim 1 whereby the web server behaves in the asynchronous model only and said web servers are herein defined as *Asynchronous Web Servers*.

31. A system as defined in claim 1, wherein an AHO can terminate without completely fulfilling the client's request.
32. A system as defined in claim 1, wherein the termination is determined by a set of predetermined rules.
33. A system as defined in claim 1, wherein the client initiates the termination of an AHO without the client request being fulfilled.
34. A system as defined in claim 1, wherein an AHO, upon termination, generates at least one additional AHO, and said type of AHO is herein defined as *Derivative AHO*.
35. A system as defined in claim 1, wherein, upon the termination of an AHO, the client determines the generation of derivatives AHOs.
36. A system as defined in claim 35, wherein the derivative AHOs are automatically deployed.
37. A system as defined in claim 35, wherein derivative AHOs can generate at least one additional derivative AHO.
38. A system as defined in claim 35, wherein the generation and deployment rules of derivative AHOs are determined by other AHOs or derivative AHOs.